The Effect Of Online Shopping Services On Customer Satisfaction: The Mediation Role Of Return Management

Resul Öztürk[1*], Abdullah Oktay Dündar[2]

[1] Necmettin Erbakan University, Faculty of Applied Sciences, Department of Management Information Systems, Konya, Turkey (ORCID: 0000-0003-1493-7315)
[2] Necmettin Erbakan University, Faculty of Applied Sciences, Department of Transportation and Logistics, Konya, Turkey (ORCID: 0000-0002-8508-165X)

Abstract

The main strategy of today's businesses is to be customer focused due to the increase in technological developments and the welfare level of the societies. Businesses that want to maintain their existence for a long time develop business policies that will satisfy their customers and establish long-term profitable relationships. It is possible for the customers to shop more comfortably and securely, especially in online shopping, when such policies, confidentiality of parties' responsibilities and customer information are clearly stated by the business. Complaints arise in cases where the product consumers want to buy does not fit the product on the internet, or the product information is inaccurate, and this causes customer dissatisfaction. Customers whose expectations are not met want to return the products they have purchased in such cases. For this reason, although the importance of distribution and logistics activities increases, it is desired to increase customer satisfaction with return management. Due to such issues, the purpose of this study is to determine the mediation role of return management on the effect of online shopping services of businesses on customer satisfaction. An online survey was conducted to 436 consumers in Konya, who performed retail shopping on electronic commerce sites, through simple random sampling, and the data obtained were analyzed through SPSS 23.0 and SPSS AMOS 22.0 package programs. In the study, a positive and statistically significant relationship was determined between online shopping services of businesses and customer satisfaction, online shopping services of businesses and return management, return management and customer satisfaction through correlation analysis. In addition, in order to determine the mediation role of return management in the relationship between the customer satisfaction and the online shopping services of the businesses, a confirmatory factor analysis was performed using a structural equation modeling, and the partial mediation role was identified.

Keywords: Online Shopping Service, E-Commerce, Retailing, Return Management, Reverse Logistics, Customer Satisfaction.

Online Alışveriş Hizmetlerinin Müşteri Memnuniyeti Üzerindeki Etkisi: İade Yönetiminin Aracılık Rolü

Öz

Teknolojik gelişmelerin ve toplumların refah seviyesinin artması sebebiyle günümüz işletmelerinin temel stratejisi müşteri odaklı olmaktır. Varlığını uzun süre devam ettirmek isteyen işletmeler müşterilerini memnun ederek uzun süreli karlı ilişkiler kurulmasını sağlayacak işletme politikaları geliştirmektedir. Müşterilerin özellikle online alışverişlerde daha rahat ve güvenli bir şekilde alışveriş yapması, bu politikaların, alışverişlerde tarafların sorumluluklarının ve müşteri bilgilerinin gizliliği gibi hususların işletme tarafından

---

* Corresponding Author: Resul Öztürk: Necmettin Erbakan University, Faculty of Applied Sciences, Department of Management Information Systems, Konya, Turkey, ORCID: 0000-0003-1493-7315, drrslozturk@gmail.com

açık bir şekilde beyan edilmesi ile mümkün olmaktadır. Tüketicilerin almak istediği ürünün internette yer alan ürüne uymaması, ürün bilgilerinin yanlışlığı gibi nedenlerden dolayı şikayetler ortaya çıkmakta ve bu durum da müşteri memnuniyetsizliğine sebep olmaktadır. Beklentileri karşılanmayan müşteriler bu gibi durumlarda satın almış olduğu ürünleri iade etmek istemektedirler. Bu nedenle dağıtım ve lojistik faaliyetlerinin önemi artmakla birlikte iade yönetimi ile müşteri memnuniyeti arttırılmak istenmektedir. Söz konusu hususlar nedeniyle bu çalışmanın amacı işletmelerin online alışveriş hizmetlerinin müşteri memnuniyeti üzerine etkisinde iade yönetiminin aracılık etkisini tespit etmektir. Elektronik ticaret sitelerinde perakende alışveriş işlemi gerçekleştiren Konya ilindeki 436 tüketiciye basit tesadüfi örnekleme yoluyla online ortamda anket uygulaması yapılmış ve elde edilen veriler SPSS 23.0 ve SPSS AMOS 22.0 paket programları aracılığıyla analiz edilmiştir. Araştırmada korelasyon analizi ile işletmelerin online alışveriş hizmetlerinin müşteri memnuniyeti, işletmelerin online alışveriş hizmetlerinin iade yönetimi, iade yönetiminin müşteri memnuniyeti ile aralarında pozitif yönlü ve istatistiksel bakımdan anlamlı bir ilişki tespit edilmiştir. Ayrıca çalışmada işletmelerin online alışveriş hizmetlerinin müşteri memnuniyeti arasındaki ilişkide iade yönetiminin aracılık etkisini tespit etmek amacıyla doğrulayıcı faktör analizi ile yapısal eşitlik modeli kullanılmış ve kısmi aracılık etkisi tespit edilmiştir.

Anahtar Kelimeler: Online Alışveriş Hizmeti, Elektronik Ticaret, Perakendecilik, İade Yönetimi, Tersine Lojistik, Müşteri Memnuniyeti.

1. Introduction

Physical merchandising or retailing performs an important function in meeting the needs of consumers. However, with advancement in technology, the development of alternative channels such as online stores, e-markets and social media also cause important changes in the shopping behavior of consumers. These online channels provide significant advantages to both businesses and consumers. Businesses can provide services to customers with lower costs without bearing the costs such as rent, electricity, water, design and labor. Customers can purchase products anywhere in the world by comparing more alternatives and spending less time. This leads to an increase in online stores and shopping every day. On the other hand, the fact that consumers decide to make purchases in online shopping only through the technical information provided by the store and the images on two-dimensional screen brings some risks for the consumer. If the purchased product or service does not fully meet the expectations, customer dissatisfaction will occur and the customer will not be willing to buy again. Businesses provide a return guarantee to eliminate this dissatisfaction with online shopping and to ensure customer satisfaction. The return and complaint policies to be developed by the businesses, and the management of the return process in accordance with these policies are important for ensuring customer satisfaction and continuity of online shopping. Thus, in cases where customer expectations are not met, the return process will be activated, customer complaints will be prevented and customer trust will be ensured.

In this study, whether the return management carried out in online shopping has a mediation role on ensuring customer satisfaction is investigated. For this purpose, a survey was applied to customers who live in Konya and shop online, the findings were shared and the results were evaluated.

2. Conceptual Framework

Information and communication technologies, which constitute the most dynamic structures of the developing global economies, contribute to the economic growth and provide businesses with strategic opportunities and powerful tools worldwide. As a result of the rapid development of the internet, the importance of e-commerce and online markets is increasing in societies with high level of knowledge (Kim et al., 2011). One of the biggest factors in increasing this importance is that consumers spend more time in digital environment as a result of the use of digital products and technology (Koçarslan and Kılınç, 2019). The Internet provides consumers with the opportunity to compare alternative products, thereby shortening the time for consumers to access information about products and decide to purchase. Since online shoppers do not physically interact with businesses and products, they decide their purchasing behavior in line with the electronic information available in online stores (Park and Kim, 2003).

Online service is the use of low-cost information technology infrastructures. In addition to providing benefits to businesses in terms of being less costly and reaching more consumers, it may create a risk perception for security reasons when consumers want to perform the first purchase action (Parthasarathy and Bhattacherjee, 1998). Online services should be provided to ensure that virtual and physical stores are perceived by consumers as both reliable and user-friendly. The online shopping process is considered as the exchange process of costs such as labor, time and money to purchase the products and services offered by a virtual store on the internet (Wu, 2013). These issues may affect consumer preferences, as they offer less shopping time, affordable prices and the ability to compare different products in digital media (Koçarslan and Kılınç, 2019). While the content and information on the websites express the features of the services and products, the design is the way the content is presented to the consumers. In addition to the importance of easy browsing of websites, use of multimedia to increase aesthetics and visual appeal, rapid access to information and evaluation of alternatives, websites should also include security measures and businesses should adopt privacy practices to increase consumer confidence (Ranganathan and Ganapathy, 2002). The customer, who carries out purchasing behavior from a certain website, initially evaluates his/her experiences according to the dimensions of the service process and can be satisfied at the end of this process. If this website has difficulties in use and inefficiencies, the customer will be dissatisfied and will not be able to use this website in the future purchasing process (Collier and Bienstock, 2006). Also, understanding consumer behavior related to the use of online shopping becomes important to develop an effective website that will facilitate online transactions and services (Lin, 2007).

Logistics services have an important place in the online shopping process in terms of their complementary role. A process is needed in logistics services in order to measure the perceptions of value created for customers and in this process, the quality of

logistics service is the criterion that will affect the satisfaction levels of the customers. Physical distribution research, such as timely delivery, accuracy and delivery status of the order, is the critical aspect of logistics service quality. Customers who cannot receive their orders under the conditions they expected are not satisfied with the quality of logistics service and can request the correction of the errors regarding the order. In this case, it is necessary to manage a process related to the inconsistencies in the criteria such as the accuracy, status and timely delivery of the order (Mentzer et al., 2001). The consumer, who cannot physically experience the product especially in online shopping, has to make decisions with limited information. This limited information increases the risk perception and makes the customer reluctant to purchase. At this point, the policies developed by the business play an important role in reducing the customer's perception of risk and encouraging the purchase. The product return policy is an important factor that can be used to influence the purchasing behavior of customers on online platforms. Customers see the product return policies as an insurance for limited knowledge and experience and can make easier purchasing decisions (Zhang et al., 2017). On the other hand, the conditions related to the return transactions of online shopping were regulated in the Law No. 6502 on Consumer Protection published in Turkey in 2013. Businesses have to carry out the process by arranging their return policies in accordance with these provisions (Tüketicinin Korunması Hakkında Kanun, 2013).

Supply chain management includes the flow of products from the supplier to the buyer as well as the flow from the buyer to the supplier (Fuente et al., 2008). Reverse logistics, contrary to traditional logistics, is a whole of logistic activities related to managing the flow from customers or distributors to businesses or manufacturers. Reverse logistics management is defined as the planning, implementation and control process of logistics activities in order to increase or eliminate the use values of the products, while it is the bottom-up logistics management process in cases where some products lose their use values, the outdated products cannot be sold or returned for some reasons (Ji, 2008). It is assumed that the customer needs will be met more quickly thanks to the integration and cooperation between the departments of the businesses, and increasing efficiency in the supply chain will increase the efficiency of the businesses (Baki, 2019). In his study where he examined the complaints about online shopping, Kayabaşı (2010) determined that 38% of the complaints were product related. Complaints about the product include those requiring a return process after shopping such as sending defective products, sending wrong products, sending broken products, sending expired products, sending used products and sending different products. On the other hand, in the study, it was reported that complaints about return were high at 26.2%. For this reason, businesses implement the process of complaint service management to resolve customer complaints that are subject to returns and to effectively manage problems with customers (Ji, 2008). Due to customer complaints and commercial returns, reverse logistics activities and the flow of goods have long existed from customers to manufacturers. Therefore, a comprehensive reverse logistics perspective can contribute to the processing and development of traditional product return management processes (Bloemhof-Ruwaard et al., 1999). Orders, logistics service quality and capacity utilization preferences will also shorten decision making processes thanks to the effective information sharing and communication of the members in the supply chain (Baki, 2019). In this form of management, basic activities are carried out in which complaints are analyzed, product update and development are performed, and information regarding complaints of returned products is managed. With the complaint service management, new added values can be offered for the customers, and the satisfaction level of the customers can be increased by retaining old customers and attracting new customers, thereby creating a way to create customer loyalty (Ji, 2008).

Customer satisfaction is the result of the value a customer perceives in a transaction, product, service or relationship. In other words, it means meeting customer expectations (Hallowell, 1996). The expectation can be expressed as meeting the performance, the customer predetermined, by the product. Businesses should identify customer expectations and align their products or services with these expectations in order to ensure customer satisfaction (Aslan et al., 2008). Continuing the loyalty of customers with companies depends on eliminating customer dissatisfaction by taking the necessary precautions and providing the services in line with the demands of the customers (Bulut, 2019). In parallel, the mismatch between the benefit and expectation of the customers from the product and service they purchased causes differences in customer satisfaction levels. Comparison of these differences is important in terms of ensuring customer satisfaction and increasing the degree of satisfaction. While customers who are satisfied with the products and services improved by the businesses play an important role in gaining new customers, customers who are not satisfied will cause loss of customers (Bozbay et al., 2016). Therefore, customer satisfaction, which is one of the factors that can affect the profitability of the businesses, is used as a criterion for determining the product and service performances (Anderson and Sullivan, 1993). Customer loyalty can arise from customer satisfaction and increase customer retention rates, one of the main behavioral goals of customer satisfaction programs (Lee et al., 2001).

3. Literature Review

The interactions of retailer businesses in electronic commerce are mostly carried out through websites (Park and Kim, 2003). Ho and Wu (1999) investigated the relationship between customer satisfaction and homepage presentation screens, logistics support, technology, information and product features on shopping sites. McKinney et al. (2002) investigated the effect of website quality, separated into information quality and system quality, on web customer satisfaction during the evaluation of alternatives and information search. From the features of internet retailing and online shopping services, Yang et al. (2003) determined that fast response, ease of use, reliability and security were among the results that satisfied the consumer. Liu et al. (2008) found that online shopping services positively affected customer satisfaction with information quality, product and service features, transaction capacity, website design, security and privacy, terms of payment, delivery time and customer service. In their study, Chang et al. (2009) concluded that e-service quality affected customer satisfaction and that they were related to each other. In their study, Alam and Yasin (2010) found that website design, product variety, delivery performances and reliability were the factors that affected consumers' online shopping satisfaction. In his study, Eid (2011) found that customer satisfaction levels were affected by e-commerce services. In their study, Chang and Wang (2011) determined that the quality of online shopping and e-service affected customer

satisfaction. In their study to determine the factors that may affect online shopping satisfaction, Vegiayan et al. (2013) identified that the success of online shopping depended on customer satisfaction. Pappas et al. (2014) found that trust and satisfaction had an impact on purchasing behavior of online shoppers. In their study to determine the factors that would affect the repurchase in online shopping, Hsu et al. (2015) concluded that the quality of the website was an important factor affecting customer satisfaction.

Kim et al. (2003) investigated the importance of managing dissatisfied consumers due to the competition caused by the use of online shopping, and made managerial implications that showed how to manage customer complaints to increase customer satisfaction. He and Liu (2006) suggested that the process of evaluating the reverse logistics complaint service management with computer telephone integration technologies should be supported by smart decision support systems. Patil and Divekar (2014) stated that customer satisfaction levels would increase with better inventory management. In their studies, Boruhan et al. (2015) investigated the managerial effects of private shopping sites that would enable them to improve their logistics capacities to solve customer complaints caused by deficiencies in logistics capabilities. Huang and Yin (2015) stated that 3PL providers should improve their logistics capacity and logistics service features since it is important for business-to-consumer (B2C) e-commerce businesses to evaluate the logistics capacity of third party logistics (3PL) providers. Lysenko-Ryba (2017) investigated the reverse logistics related to B2C, and particularly the relationship between the customer return management and customer satisfaction. Jalil (2018) argued that order accuracy was the most important factor in influencing online shopping behavior and that logistics variables such as order condition, timely delivery, easy access and reverse logistics also affected the online shopping behavior. Ergan and Akyol (2018) reported that sometimes problems were experienced in purchases without seeing physically by consumers due to access, time saving and convenience, and product was returned and exchanged to solve the problems, and they emphasized the importance of reverse logistics for businesses in these cases. In B2C e-commerce, Li and Lu (2019) investigated the effects of factors such as process quality, convenience and empathy to reveal consumer perception in service quality of reverse logistics.

In their study, Cao et al. (2018) stated that return services were effective as well as customer service for online shoppers. Ji (2008) determined that the organizational framework was explained by operational processes and the dynamic resilience of the virtual enterprise to establish the relationship between complaint service management and reverse logistics. Banomyong et al. (2008) found that reverse logistics applications increased customer satisfaction while reducing repair and return time and logistics costs. In their study to investigate the impact of quality dimensions on customer satisfaction and loyalty in third-party logistics services, Tontini et al. (2017) showed that customers continued to work with the business when they trusted their services. Sheikh and Rana (2011) identified the effects of supply chain integration, advanced information technology and third-party logistics suppliers on customer satisfaction. Lin and Zhang (2015) examined the effect of logistics service innovation on online shoppers' intent of repurchasing.

Mollenkopf et al. (2007) proved the effect of structural equation modeling and return management on customer loyalty by dealing with the relationship between internet retailing, service quality, supply chain management and customer satisfaction/loyalty. Subramanian et al. (2014) identified strategic factors such as logistics, quality and customer satisfaction of e-retailers. By testing the structural equation model he developed in his study, Wu (2013) concluded that distributive and interactive justice significantly contributed to customer satisfaction and, consequently, complaint intentions, but that procedural justice was not effective.

4. Research Methodology

This section firstly covers the purpose and hypothesis of the study, then the information about the material and method used in the research.

4.1. Hypothesis

Although there are studies investigating the relationship between customer satisfaction and return management of online shopping services in the literature, there are a limited number of studies in which the mediation role of return management is tried to be determined in the relationship between online shopping services and customer satisfaction. Therefore, by developing the structural equation model, the purpose of the study was determined as follows.

The aim of the study is to determine the mediation effect of return management on the effect of online shopping services on customer satisfaction. In this context, research hypotheses are as follows:

H_1: There is a positive and statistically significant relationship between online shopping services and customer satisfaction.

H_2: There is a positive and statistically significant relationship between online shopping services and return management.

H_3: There is a positive and statistically significant relationship between return management and customer satisfaction.

H_4: Return management has an mediation role in the relationship between online shopping services and customer satisfaction.

4.2. Research Sample and Method

Quantitative research method was adopted in the study and the target population consisted of consumers in Konya. In cases where the size of the population was not clearly known, it was stated, taking into account the sampling error (+/- 0.05), that a sample of 384 had the ability to represent the population (Sekaran, 2003). The study was carried out in December 2019 by collecting data via applying 500 questionnaires to consumers in Konya province through simple random sampling. Due to the fact that the questionnaire forms were not filled with consumers and they were filled in incorrectly or incompletely, the response rate to the questionnaire forms was 87.2%, and 436 questionnaires were evaluated.

The data collected as a result of the survey method were analyzed with SPSS 23.0 and SPSS AMOS 22.0 package programs. According to the data obtained in the study, it was determined that 52.1% of the respondents were male, 51.8% were married, 44.7% were between 18-25 years old, 63.5% were university graduates and 43% had monthly income of 2,000 TL and more.

In the study, 3 different scales were used: online shopping service (OSS), return management (RM) and customer satisfaction (SAT) dimensions. For the scales used for research variables, Ranganathan and Ganapathy (2002), Mentzer et al. (2001), Collier and Bienstock (2006), Oliver (1980), Parasuraman et al. (1988), Anderson and Sullivan (1993), Hallowell (1996), Özgül et al. (2017) 's studies were used. Online shopping services are discussed in three sub-dimensions with three items on the scale: security (SEC), privacy (PRI) and ease of use (EAS). The survey included 24 items in total, including 9 items on online shopping service with sub-dimensions, 9 items on return management and 6 items on customer satisfaction.

5. Results and Discussion

The data collected in the study were analyzed using the SPSS AMOS program for structural equation modeling. In the study, firstly, exploratory factor analysis was performed with the SPSS program and then confirmatory factor analysis was used to test the results. According to the confirmatory factor analysis, items that do not carry good fit values and do not provide construct validity from among the items in the dimensions of the variables included in the scale were excluded. As a result of reliability analysis, the scale was found to have reliable results and finally the structural equation modeling was used to test the research hypotheses (Ozturk and Coban, 2019).

Analyzes were performed by making modifications for confirmatory factor analysis using the AMOS program to achieve best fit values and ensure construct validity (Karagöz, 2016). Accordingly, 2 items on the online shopping services scale, 2 items on the return management scale and 1 item on the customer satisfaction scale were excluded and structure validity was achieved. In line with these findings, the goodness of fit values for the scales were shown in Table 1.

Table 1: Goodness of Fit Values

Variables	X^2	df	X^2/df	GFI	CFI	RMSEA
Online Shopping Service	23,259	11	2,114	0,986	0,990	0,051
Return Management	49,329	14	3,524	0,971	0,979	0,076
Customer Satisfaction	15,276	5	3,055	0,987	0,991	0,069
Good Fit Values			*≤3*	*≥0,90*	*≥0,95*	*≤0,05*
Acceptable Fit Values			*≤4-5*	*≥0,85*	*≥0,90*	*≤0,08*

As a result of the confirmatory factor analysis made for the statements in the scale according to the remaining statements, goodness of fit values were within acceptable limits and significant (p<0,05). In addition, Hotelling T test was performed in order to test the suitability of the model in the reliability calculations of the scales. As a result of the Hotelling T test, it was determined that there was no difference between the measurements and that the scale was summable (p>0,05).

After the statements were excluded from the scale in line with the findings obtained in the confirmatory factor analysis, factor loads and validity values of the scale and the remaining expressions were shown in Table 2.

Table 2. Factor Loads and Validity Values

	Online Shopping Service	Return Management	Customer Satisfaction
KMO and Barlett's Test	0,691 χ^2=1192,211 (p < 0,001)	0,914 χ^2=1686,827 (p < 0,001)	0,840 χ^2=1160,052 (p < 0,001)
Total Variance Explained	7 items 43,416	7 items 63,475	5 items 63,730

When the exploratory factor analysis results of the scales used in the study were evaluated, the structure validity of the scales was determined to be compatible with the structures in the literature and when the scales of KMO values were analyzed, the online shopping service (0,691), return management (0,914) and customer satisfaction (0,840) scales were found to be highly reliable (0,60>α>0,80).

Descriptive statistics (mean and standard deviation), correlation and reliability analysis results of the variables were given in Table 3.

Table 3. Mean, Standard Deviation, Reliability And Correlation Values Of Variables

Variables	X̄	SD	1	2	3
Online Shopping Service (1)	3,29	0,52	(0,609)		
Return Management (2)	3,48	0,70	,465**	(0,903)	
Customer Satisfaction (3)	3,48	0,54	,498**	,670**	(0,726)

Notes: (i) n=436, (ii) **p<.001, *p<.05.

When the mean and standard deviation values of the research variables were considered, it was concluded that they agreed with the expressions of online shopping service (M.=3,29; S.D.=0,52), return management (M.=3,48; S.D.=0,70), customer satisfaction (M.=3,48; S.D.=0,54). When Pearson correlation analysis results were analyzed, it was determined that there was a moderately positive and significant relationship between online shopping service and return management (r=0,465; p<0,01), and a moderately positive and significant relationship between online shopping service and customer satisfaction (r=0,498; p<0,01). A moderately positive and significant relationship was found between return management and customer satisfaction (r=0,670; p<0,01). Cronbach's Alpha (α) values were calculated within the scope of the reliability analysis results of the variables, it was concluded that the online shopping service (0,609), return management (0,903), customer satisfaction (0,726) scales were highly reliable (0,60>α>0,80).

As a result of the confirmatory factor analysis, the structural equation model was used to test the hypotheses of the research with the items in the scale. The findings were shown in Table 4.

Table 4. Structural Equation Model Goodness of Fit Values

Variables	X²	df	X²/df	GFI	CFI	RMSEA
Online Shopping Service – Customer Satisfaction	126,914	40	3,173	0,951	0,965	0,071
Return Management – Customer Satisfaction	119,869	34	3,526	0,951	0,965	0,076
Online Shopping Service – Return Management	213,830	73	2,929	0,938	0,954	0,067
Good Fit Values			*≤3*	*≥0,90*	*≥0,95*	*≤0,05*
Acceptable Fit Values			*≤4-5*	*≥0,85*	*≥0,90*	*≤0,08*

According to the data in Table 4, sufficient evidence was provided that the model's fit values were within acceptable limits and that the model was structurally appropriate. The coefficients for the structural equation model were given in Table 5 and in Figure 1.

Table 5. Structural Equation Model Coefficients

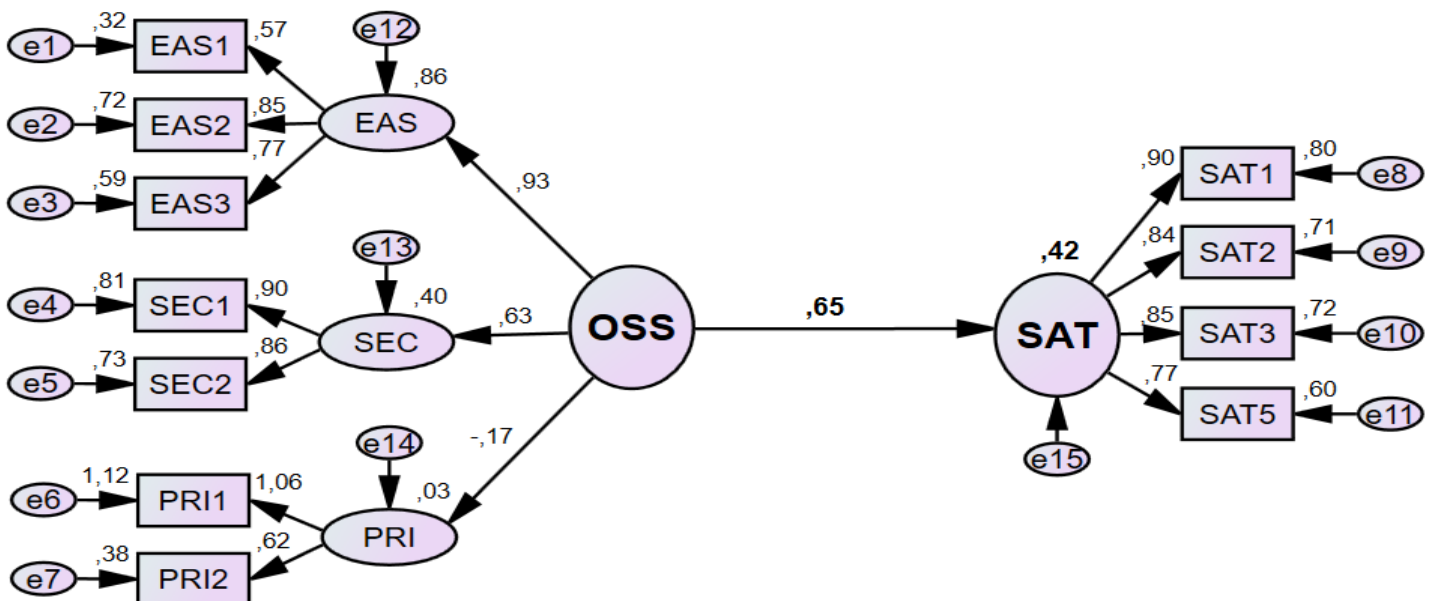| Variables	Standardize β	Standart Error	p	R²
Online Shopping Service – Customer Satisfaction	0,65	0,122	***	0,649
Return Management – Customer Satisfaction	0,72	0,046	***	0,721
Online Shopping Service – Return Management	0,66	0,118	***	0,661

Figure 1. Structural Equation Model Coefficients

According to these findings, it was seen that online shopping services affected customer satisfaction (β=0,65; p<0,05), return management affected customer satisfaction (β=0,72; p<0,05), online shopping services affected return management (β=0,66; p<0,05) and that H₁, H₂ and H₃ hypotheses were supported. When the Squared Multiple Correlations (R^2) values obtained with the structural equation model were examined, it was seen that 64.9% of customer satisfaction was explained by online shopping services, 72.1% of customer satisfaction was explained by return management and 66.1% of return management was explained by online shopping services.

Finally, in accordance with the purpose of the study, the data of the structural equation model created to test the mediation role in the H₄ hypothesis were given in Table 6.

Table 6. Goodness Of Fit Values Of The Structural Equation Model Created To Measure The Mediation Effect

Variables	X^2	df	X^2/df	GFI	CFI	RMSEA
Online Shopping Service – Return Management – Customer Satisfaction	369,218	113	3,267	0,918	0,935	0,072
Good Fit Values			≤3	≥0,90	≥0,95	≤0,05
Acceptable Fit Values			≤4-5	≥0,85	≥0,90	≤0,08

According to the data in Table 6, sufficient evidence was provided that the fit values of the model created to measure the mediation role were within acceptable limits and that the model was structurally appropriate. The coefficients for the structural equation model created to measure the mediation role were given in Table 7 and Figure 2.

Table 7: Structural Equation Model Coefficients Created To Measure Mediation Effect

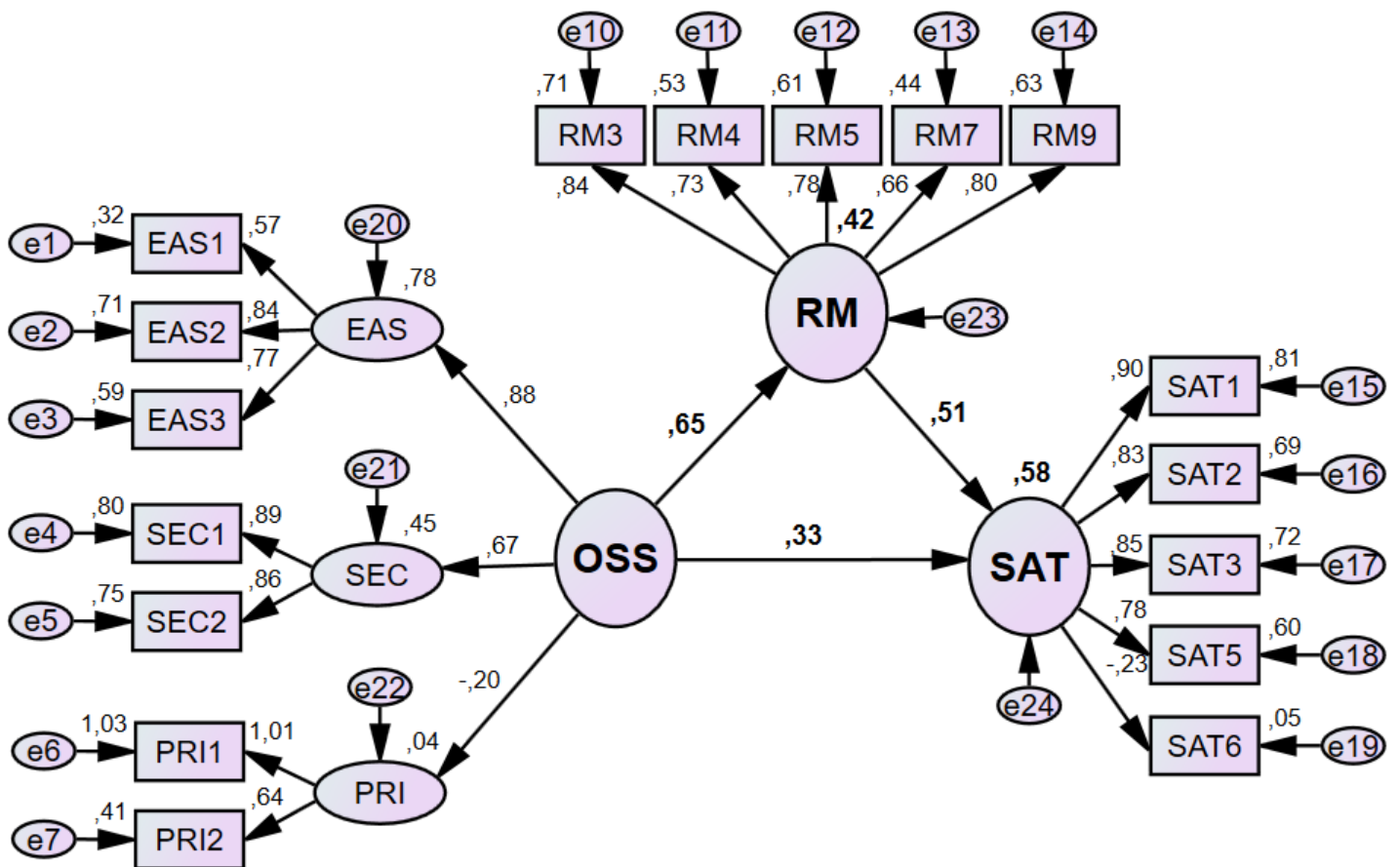| Variables	Standardize β	Standart Error	p	R^2
Online Shopping Service – Customer Satisfaction	0,33	0,113	***	0,58
Return Management – Customer Satisfaction	0,51	0,061	***	
Online Shopping Service – Return Management	0,65	0,133	***	0,42

Figure 2. Structural Equation Model Coefficients Created To Measure Mediation Effect

According to the coefficients of structural equation model created to measure the mediation effect, it was seen that online shopping services affected customer satisfaction (β=0,33; p<0,05). Accordingly, the H_4 hypothesis was supported. When Squared Multiple Correlations (R^2) values were analyzed, it was seen that 58% of customer satisfaction was explained by online shopping services and return management, and 42% of return management was explained by online shopping services.

Baron and Kenny (1986) stated that the mediation effect could be realized in three stages. In our study, three stages were tested and the relationship between the mediation variable and the dependent variable should be p<0.05 by including the mediation variable in the model. The fact that the β coefficient of the independent variable (online shopping services) on the dependent variable (customer satisfaction) decreased from 0.65 to 0.33 indicated that there may be a partial mediation role.

6. Conclusions and Recommendations

By being affected by the developments in information technologies and competition, businesses operating in the retailing sector offer consumers online shopping services. While providing these services, it becomes important for consumers to find products easily on the internet or mobile applications, and to keep the information of both identity and the tools used in purchasing methods confidential when purchasing products and services. In addition to starting to have the opportunity to easily access the products on the internet or mobile applications, consumers will want the product or service to reach themselves as soon as possible after the purchase. The lack or failure of orders regarding the products or services purchased will reveal customers' requests for change or return. In this case, businesses must meet the expectations of the customers as soon as possible. In this way, businesses that will fulfill the necessary process to meet the expectations of customers will have the chance not to lose customers and increase their sales by enhancing customer satisfaction.

This study was carried out to determine the level of customer satisfaction with online shopping services and their thoughts on the solution of the problems they encountered in case of any dissatisfaction. In line with the findings obtained in the study;

- A positive, moderate and statistically (r=0,498; p<0,01) significant relationship was found between online shopping services and customer satisfaction. With the findings obtained in their studies, Lee and Lin (2005), Lin and Sun (2009) and Nisar and Prabhakar (2017) supported the H_1 hypothesis that a statistically significant effect of online shopping services on customer satisfaction was tested.

- A positive, moderate and statistically (r=0,465; p<0,01) significant relationship was found between online shopping services and return management. With the findings obtained in their studies, Lin and Zhang (2015) and Rajendran et al. (2018) supported the H_2 hypothesis that a statistically significant effect of online shopping services on return management was tested.

- A positive, moderate and statistically (r=0,670; p<0,01) significant relationship was determined between return management and customer satisfaction. With the findings they obtained in their studies, Lin and Zhang (2015) supported the H_3 hypothesis that a statistically significant effect of return management on customer satisfaction was tested.

- It was seen that online shopping services affected customer satisfaction (β=0,65; p<0,05), return management affected customer satisfaction (β=0,72; p<0,05), online shopping services affected return management (β=0,66; p<0,05). When Squared Multiple Correlations (R^2) values obtained with the structural equation model were analyzed, it was observed that 64.9% of customer satisfaction could be explained by online shopping services, 72.1% of customer satisfaction by return management and 66.1% of return management by online shopping services.

- It was seen that online shopping services affected customer satisfaction (β=0,33; p<0,05) according to the coefficients of structural equation model created to measure the mediation effect. Accordingly, the H_4 hypothesis was supported in which the mediation role of return management was tested in the relationship between online shopping services and customer satisfaction. When Squared Multiple Correlations (R^2) values were analyzed, it was found that 58% of customer satisfaction could be explained by online shopping services and return management, and 42% of return management could be explained by online shopping services.

- Consequently, in line with the data collected for the study and the findings obtained as a result of the analyzes, by testing the purpose and hypotheses of the study with confirmatory factor analysis and structural equation modeling, the decrease in the coefficient β of the independent variable (online shopping services) on the dependent variable (customer satisfaction) from 0.65 to 0.33 indicated that there may be a partial mediation effect.

These results show that even if there is a change in the way marketing activities and product and service presentations are made, the importance of logistics is increasing day by day as a complement to the online shopping service in order to fulfill the products and services purchased by the customers completely and correctly. At this point, while carrying out the marketing activities, businesses should also give the necessary importance to logistics activities. In addition, it is essential to take necessary steps related to return management, which is an important reverse logistics activity, to eliminate the problems and complaints about customers' orders. Customer satisfaction should be ensured and customers should be turned into loyal customers by preventing complaints via customer service. Thus, loyal customers will repurchase and may positively affect the purchases of other customers. In future studies that can be carried out according to different samples and customer types, the effect of customer service effectiveness on customer satisfaction can be addressed.

References

Alam, S. S., & Yasin, N. M. (2010). An investigation into the antecedents of customer satisfaction of online shopping. *Journal of Marketing Development and Competitiveness, 5*(1), 71-78.

Anderson, E. W., & Sullivan, M. W. (1993). The antecedents and consequences of customer satisfaction for firms. *Marketing Science, 12*(2), 125-143.

Aslan, Ş., Sezgin, M. & Haşıloğlu, S.B. (2008). Özel sağlık kuruluşlarında müşteri memnuniyeti ve memnuniyeti oluşturan unsurların araştırılması. *Muğla Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (20), 23-40.

Baki, R. (2019). Bilgi teknolojileri ve üst yönetim desteğinin tedarik zinciri performansına etkisi: Türkiye için ampirik bir yaklaşım. *Avrupa Bilim ve Teknoloji Dergisi*, (17), 916-926.

Banomyong, R., Veerakachen, V., & Supatn, N. (2008). Implementing leagility in reverse logistics channels. *International Journal of Logistics: Research and Applications, 11*(1), 31-47.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Bloemhof-Ruwaard, J. M., Fleischmann, M., & Van Nunen, J. A. (1999). Reviewing distribution issues in reverse logistics. *In New Trends in Distribution Logistics* (pp. 23-44). Springer, Berlin, Heidelberg.

Boruhan, G., Ersoy, P., & Yumurtaci, I. (2015). What is wrong with private shopping sites?–evidence from turkey. *Journal of Business Economics and Finance*, 401-421.

Bozbay, Z., Yaman, Y., & Özkan, E. (2016). İnternet perakendeciliğinde hizmet kalitesinin müşteri memnuniyeti üzerindeki rolü: Hazır giyim ve kitap sektörü üzerine karşılaştırmalı bir araştırma. *Journal of Transportation and Logistics, 1*(1), 19-38.

Bulut, F. (2019). Bankacılık sektöründe yeni özniteliklerle ve makine öğrenmesi yöntemleriyle müşteri ilişkileri yönetiminin zenginleştirilmesi. *Avrupa Bilim ve Teknoloji Dergisi*, (16), 382-394.

Cao, Y., Ajjan, H., & Hong, P. (2018). Post-purchase shipping and customer service experiences in online shopping and their impact on customer satisfaction. *Asia Pacific Journal of Marketing and Logistics*.

Chang, H. H., Wang, Y. H., & Yang, W. Y. (2009). The impact of e-service quality, customer satisfaction and loyalty on e-marketing: Moderating effect of perceived value. *Total Quality Management, 20*(4), 423-443.

Chang, H. H., & Wang, H. W. (2011). The moderating effect of customer perceived value on online shopping behaviour. *Online Information Review*.

Collier, J. E., & Bienstock, C. C. (2006). Measuring service quality in e-retailing. *Journal of Service Research, 8*(3), 260-275.

De la Fuente, M. V., Ros, L., & Cardos, M. (2008). Integrating forward and reverse supply chains: application to a metal-mechanic company. *International Journal of Production Economics, 111*(2), 782-792.

Eid, M. I. (2011). Determinants of e-commerce customer satisfaction, trust, and loyalty in Saudi Arabia. *Journal of Electronic Commerce Research, 12*(1), 78.

Ergan, S., & Akyol, A. (2018). *Reverse Logistics in E-Retailing*. In Handbook of Research on Supply Chain Management for Sustainable Development (pp. 305-330). IGI Global.

Hallowell, R. (1996). The relationships of customer satisfaction, customer loyalty, and profitability: an empirical study. *International Journal of Service Industry Management, 7*(4), 27-42.

He, Y., & Liu, Z. (2006, December). Process Computing of Complaint Service Management in Reverse Logistics. In 2006 IEEE Asia-Pacific Conference on Services Computing (APSCC'06) (pp. 315-322). IEEE.

Ho, C. F., & Wu, W. H. (1999, January). Antecedents of customer satisfaction on the Internet: an empirical study of online shopping. In Proceedings of the 32nd Annual Hawaii International Conference on Systems Sciences. 1999. HICSS-32. Abstracts and CD-ROM of Full Papers (pp. 9-pp). IEEE.

Hsu, M. H., Chang, C. M., & Chuang, L. W. (2015). Understanding the determinants of online repeat purchase intention and moderating role of habit: The case of online group-buying in Taiwan. *International Journal of Information Management, 35*(1), 45-56.

Huang, Y., & Yin, K. (2015). Evaluation Indexes of the Third-Party Logistics Providers' Logistics Capability in B2C E-commerce Mode. In LISS 2013 (pp. 181-189). Springer, Berlin, Heidelberg.

Jalil, E. E. (2018). The Importance of Logistical Factors in Online Shopping Behaviour. Knowledge Management International Conference (KMICe) 2018, 25 –27 July 2018, Miri Sarawak, Malaysia.

Ji, G. J. (2008). Reverse Logistics Operation Management Based on Virtual Enterprises and Complaint Service Manage-ment. *Journal of Service Science and Management, 1*(01), 51.

Karagöz, Y. (2016). *SPSS ve amos 23 uygulamalı istatistiksel analizler*. Ankara: Nobel Akademik Yayıncılık.

Kayabaşı, A. (2010). Elektronik (online) Alışverişte Lojistik Faaliyetlere Yönelik Müşteri Şikayetlerinin Analizi ve Bir Alan Araştırması. *İşletme Araştırmaları Dergisi*, (2), 21-42.

Kim, C., Kim, S., Im, S. and Shin, C. (2003), "The effect of attitude and perception on consumer complaint intentions", *Journal of Consumer Marketing*, Vol. 20 No. 4, pp. 352-371.

Kim, M. J., Chung, N., & Lee, C. K. (2011). The effect of perceived trust on electronic commerce: Shopping online for tourism products and services in South Korea. *Tourism Management, 32*(2), 256-265.

Koçarslan, H. & Kılınç, H. (2019). Dijital pazarlamada tüketici algısı, internette alışveriş üzerine bir araştırma. *Avrupa Bilim ve Teknoloji Dergisi*, (17), 1263-1273.

Lee, J., Lee, J., & Feick, L. (2001). The impact of switching costs on the customer satisfaction-loyalty link: Mobile phone service in France. *Journal of Services Marketing, 15*(1), 35-48.

Lee, G. G., & Lin, H. F. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*.

Li, Y., & Lu, L. (2019, February). Research on B2C Reverse Logistics Service Quality Evaluation System. In Proceedings of the 2019 5th International Conference on E-Business and Applications (pp. 10-15).

Lin, D., & Zhang, R. (2015, August). Research on the Impact Mechanism between Logistics Service Innovation and Online Customer Repurchase Intention. In 2015 International Conference on Management Science and Management Innovation (MSMI 2015). Atlantis Press.

Lin, H. F. (2007). Predicting consumer intentions to shop online: An empirical test of competing theories. *Electronic Commerce Research and Applications, 6*(4), 433-442.

Lin, G. T., & Sun, C. C. (2009). Factors influencing satisfaction and loyalty in online shopping: an integrated model. *Online Information Review*.

Liu, X., He, M., Gao, F., & Xie, P. (2008). An empirical study of online shopping customer satisfaction in China: a holistic perspective. *International Journal of Retail & Distribution Management*.

Lysenko-Ryba, K. (2017). The Impact of Reverse Logistics on Customers Satisfaction. *Przedsiębiorczość i Zarządzanie, 18*(8.2), 137-146.

McKinney, V., Yoon, K., & Zahedi, F. M. (2002). The measurement of web-customer satisfaction: An expectation and disconfirmation approach. *Information Systems Research, 13*(3), 296-315.

Mentzer, J. T., Flint, D. J., & Hult, G. T. M. (2001). Logistics service quality as a segment-customized process. *Journal of Marketing, 65*(4), 82-104.

Mollenkopf, D. A., Rabinovich, E., Laseter, T. M., & Boyer, K. K. (2007). Managing internet product returns: a focus on effective service operations. *Decision Sciences, 38*(2), 215-250.

Nisar, T. M., & Prabhakar, G. (2017). What factors determine e-satisfaction and consumer spending in e-commerce retailing?. *Journal of Retailing and Consumer Services, 39*, 135-144.

Ozturk, R., & Coban, S. (2019). Political Marketing, Word of Mouth Communication and Voter Behaviours Interaction. *Business and Economics Research Journal, 10*(1), 245-258.

Özgül, E., Börühan, G., & Tek, Ö. B. (2017). Özel alışveriş sitelerinde siparişlerin yerine getirilmesinde lojistik hizmet kalitesinin müşteri memnuniyetine etkisi. *Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 19*(4), 629-664.

Pappas, I. O., Pateli, A. G., Giannakos, M. N., & Chrissikopoulos, V. (2014). Moderating effects of online shopping experience on customer satisfaction and repurchase intentions. *International Journal of Retail & Distribution Management*.

Park, C. H., & Kim, Y. G. (2003). Identifying key factors affecting consumer purchase behavior in an online shopping context. *International Journal of Retail & Distribution Management, 31*(1), 16-29.

Parthasarathy, M., & Bhattacherjee, A. (1998). Understanding post-adoption behavior in the context of online services. *Information Systems Research, 9*(4), 362-379.

Patil, H., & Divekar, B. R. (2014). Inventory management challenges for B2C e-commerce retailers. *Procedia Economics and Finance, 11*, 561-571.

Rajendran, S. D., Wahab, S. N., Ling, Y. W., & Yun, L. S. (2018). The Impact of Logistics Services On the E-Shoppers' Satisfaction. *International Journal of Supply Chain Management, 7*(5), 461-469.

Ranganathan, C., & Ganapathy, S. (2002). Key dimensions of business-to-consumer web sites. *Information & Management, 39*(6), 457-465.

Sekaran, U. (2003). *Research methods for business: A skill building approach*. New Jersey, NJ: John Wiley & Sons Inc.

Sheikh, Z., & Rana, S. (2011). Role of third party logistics providers with advanced IT to increase customer satisfaction in supply chain integration. In Society of Interdisciplinary Business Research (SIBR) 2011 Conference on Interdisciplinary Business Research.

Subramanian, N., Gunasekaran, A., Yu, J., Cheng, J., & Ning, K. (2014). Customer satisfaction and competitiveness in the Chinese E-retailing: Structural equation modeling (SEM) approach to identify the role of quality factors. *Expert Systems with Applications, 41*(1), 69-80.

Tontini, G., Söilen, K.S. and Zanchett, R. (2017), "Nonlinear antecedents of customer satisfaction and loyalty in third-party logistics services (3PL)", *Asia Pacific Journal of Marketing and Logistics, Vol. 29* No. 5, pp. 1116-1135.

Tüketicinin Korunması Hakkında Kanun (2013, 28 Kasım). Resmi Gazete (Sayı:28835).

Vegiayan, K., Ming, C., & Harun, M. L. (2013). Online shopping and customer satisfaction in Malaysia. *International Journal of Marketing Practices, 1*(1), 43-51.

Wu, L. (2013). The antecedents of customer satisfaction and its link to complaint intentions in online shopping: An integration of justice, technology, and trust. *International Journal of Information Management, 33*(1), 166-176.

Yang, Z., Peterson, R. T., & Cai, S. (2003). Services quality dimensions of Internet retailing: an exploratory analysis. *Journal of Services Marketing*.

Zhang, J., Li, H., Yan, R., & Johnston, C. (2017). Examining the signaling effect of e-tailers' return policies. *Journal of Computer Information Systems, 57*(3), 191-200.